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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/026,695	12/27/2001	Kazuhiko Kurata	GNE462A	9287

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EXAMINER

PHAN, HANH

ART UNIT PAPER NUMBER

2638

DATE MAILED: 09/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/026,695	Applicant(s) KURATA ET AL.	
	Examiner Hanh Phan	Art Unit 2638	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 December 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This Office Action is responsive to the Amendment filed on 07/11/2005.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-11 and 13-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jiang et al (US Patent No. 6,213,651) in view of Jewell et al (US Patent No. 6,243,508).

Regarding claim 1, referring to Figures 5 and 6A, Jiang teaches an optical transceiver comprising:

- a substrate (205)(Figs. 5 and 6A);
- a transmitter section (110)(Figs. 5 and 6A) formed on the substrate;
- the transmitter section (110)(Figs. 5 and 6A) including a light-emitting element;
- a receiver section (111)(Figs. 5 and 6A) formed on the substrate to be close to the transmitter section; the receiver section (111) including a light-receiving element;
- a conductive first connection member (i.e., optical block 402, Figs. 5 and 6A) fixed near the substrate;

the first connection member (optical block 402) having a first opening (514)(Figs. 5 and 6A) that allows a first light beam from the light-emitting element (110) to penetrate the first connection member (402);

the first opening (514) being aligned to an optical axis of the light-emitting element (110);

the first connection member (402) having a second opening (513)(Figs. 5 and 6A) that allows a second light beam toward the light-receiving element (111) to penetrate the first connection member (402);

the second opening (513) being aligned to an optical axis of the light-receiving element (111); and

two transparent second connection member (i.e., lenses 423 and 421, Fig. 6A) fixed near the first member (402) in such a way as to shut the first opening (514)(Fig. 6A) and the second opening (513) (Fig. 6A) of the first connection member (402) at a front of the first connection member;

the first light beam from the light-emitting element (110)(Fig. 6A) propagating through the first opening (514) and the second connection member (lens 423)(Fig. 6A);

the second light beam toward the light-receiving element (111)(Fig. 6A) propagating through the second connection member (lens 421)(Fig. 6A) and the second opening (513)(see col. 7, lines 59-67 and col. 8, lines 1-32).

Jiang differs from claim 1 in that he fails to teach a single transparent member closing both openings. However, Jewell in US Patent No. 6,243,508 teaches a single transparent member closing both openings (Figs. 9 and 16, col. 13, lines 35-56, col. 16,

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lines 1-12 and col. 7, lines 60-67). Therefore, it would have been obvious to one having skill in the art at the time the invention was made to incorporate the single transparent member closing both openings as taught by the Jewell in the system of Jiang. One of ordinary skill in the art would have been motivated to do this Jewell suggests in column 13, lines 35-56, col. 16, lines 1-12 and col. 7, lines 60-67 that using such the single transparent member closing both openings have advantage of allowing providing thermal expansion matching with other materials and reducing the cost of device.

Regarding claim 2, the combination of Jiang and Jewell teaches the second connection member is formed by a thin plate of plastic or glass (col. 7 of Jewell, lines 60-67).

Regarding claim 3, the combination of Jiang and Jewell teaches the second connection member has a lens function for at least one of the first and second light beams (Figs. 9 and 16 of Jewell)

Regarding claim 4, the combination of Jiang and Jewell teaches the second connection member is formed by a thin plate of plastic or glass; and wherein the second connection member includes a first lens near the first opening of the first connection member and a second lens near the second opening thereof (Figs. 9 and 16 of Jewell, col. 7, lines 60-67).

Regarding claim 5, the combination of Jiang and Jewell teaches each of the first and second lenses is a convex lens (Figs. 4 and 6A of Jiang and Fig 9 of Jewell).

Regarding claims 6 and 8, Jiang further teaches the first lens has a focal length defined in such a way that the first light beam emitted from the light-emitting element

converges on an opposing end face of an optical fiber to be optically connected to the transceiver (Fig. 6A).

Regarding claim 7, Jiang further teaches the first lens is a convex lens and the second lens is a concave lens (Figs. 4 and 6A).

Regarding claims 9 and 17, Jiang further teaches the first connection member has a recess formed on its front face; and wherein the second connection member is located in the recess (Fig. 6A).

Regarding claim 10, Jiang further teaches the first connection member has a thickness greater than a depth of the recess, thereby part of the first connection member protrudes from the recess (Fig. 6A).

Regarding claim 11, Jiang further teaches a connection structure for connecting optical fibers (i.e., fibers 422, Fig. 6A) supported by an optical connector to the transceiver formed on the first connection member; wherein the connection structure is designed in such a way that opposing ends of the fibers are contacted with the transparent second connection member.

Regarding claims 13 and 14, Jiang further teaches the first connection member is made of metal (Figs. 5 and 6A).

Regarding claim 15, Jiang further teaches the first connection member is electrically connected to the ground (Fig. 1).

Regarding claim 16, Jiang further teaches a metallic shielding member (109)(Fig. 1) located on the surface of the substrate between the transmitter section and the

receiver section wherein the metallic shielding member separates the transmitter section and the receiver section from each other.

Regarding claim 18, Jiang further teaches the first and second light beams are approximately parallel to the surface of the substrate and wherein the first connection member is fixed near an end of the substrate (Figs. 5 and 6A).

4. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jiang et al (US Patent No. 6,213,651) in view of Jewell et al (US Patent No. 6,243,508) and further in view of Prior Art Fig. 1.

Regarding claim 12, Jiang as modified by Jewell differs from claim 12 in that he fails to teach the opposing ends of the fibers protrude backward from a rear face of the connector by a specific length. However, Prior Art Fig. 1 teaches the opposing ends of the fibers protrude backward from a rear face of the connector by a specific length. Therefore, it would have been obvious to one having skill in the art at the time the invention was made to incorporate the opposing ends of the fibers protrude backward from a rear face of the connector by a specific length as taught by the Prior Art Fig. 1 in the system of Jiang modified by Jewell. One of ordinary skill in the art would have been motivated to do this Prior Art Fig. 1 suggests that using such the opposing ends of the fibers protrude backward from a rear face of the connector by a specific length have advantage of allowing the optical fiber connector and the optical transceiver being coupled each other.

Response to Arguments

5. Applicant's arguments with respect to claims 1-18 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hanh Phan whose telephone number is (571)272-3035.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kenneth Vanderpuye, can be reached on (571)272-3078. The fax phone number for the organization where this application or proceeding is assigned is (571)273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-4700.


HANH PHAN
PRIMARY EXAMINER